

36. Yoon, J. C.; Chickering, T. W.; Rosen, E. D.; Dussault, B.; Qin, Y.; Soukas, A.; Friedman, J. M.; Holmes, W. E.; Spiegelman, B. M. : Peroxisome proliferator-activated receptor gamma target gene encoding a novel angiopoietin-related protein associated with adipose differentiation. *Molec. Cell. Biol.* 20: 5343-5349, 2000. PubMed ID : 10866690

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**WHAT IS CLAIMED IS:**

1. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

10 (a) a mature form of an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57;

15 (b) a variant of a mature form of an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57 wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of the amino acid residues from the amino acid sequence of said mature form;

(c) an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57; and

20 (d) a variant of an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57 wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of amino acid residues from said amino acid sequence.

25 2 The polypeptide of claim 1, wherein said polypeptide comprises the amino acid sequence of a naturally-occurring allelic variant of an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57.

30 3. The polypeptide of claim 2, wherein said allelic variant comprises an amino acid sequence that is the translation of a nucleic acid sequence differing by a single nucleotide from a nucleic acid sequence selected from the group consisting of SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 40, 42, 44, 46, 48, 50, 52, 54 and 56.

4. The polypeptide of claim 1, wherein the amino acid sequence of said variant comprises a conservative amino acid substitution.
5. An isolated nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide comprising an amino acid sequence selected from the group consisting of:
- 5 (a) a mature form of an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57;
- (b) a variant of a mature form of an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57 wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of the amino acid residues from the amino acid sequence of said mature form;
- 10 (c) an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57;
- (d) a variant of an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57 wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of amino acid residues from said amino acid sequence;
- 15 (e) a nucleic acid fragment encoding at least a portion of a polypeptide comprising an amino acid sequence chosen from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 41, 43, 45, 47, 49, 51, 53, 55 and 57 or a variant of said polypeptide, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of amino acid residues from said amino acid sequence; and
- 20 (f) a nucleic acid molecule comprising the complement of (a), (b), (c), (d) or (e).
6. The nucleic acid molecule of claim 5, wherein the nucleic acid molecule comprises the nucleotide sequence of a naturally-occurring allelic nucleic acid variant.
7. The nucleic acid molecule of claim 5, wherein the nucleic acid molecule encodes a polypeptide comprising the amino acid sequence of a naturally-occurring polypeptide variant.
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8. The nucleic acid molecule of claim 5, wherein the nucleic acid molecule differs by a single nucleotide from a nucleic acid sequence selected from the group consisting of SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 40, 42, 44, 46, 48, 50, 52, 54 and 56.
9. The nucleic acid molecule of claim 5, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of
- 5 (a) a nucleotide sequence selected from the group consisting of SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 40, 42, 44, 46, 48, 50, 52, 54 and 56;
- (b) a nucleotide sequence differing by one or more nucleotides from a nucleotide sequence selected from the group consisting of SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 40, 42, 44, 46, 48, 50, 52, 54 and 56 provided that no more than 20% of the nucleotides differ from said nucleotide sequence;
- 10 (c) a nucleic acid fragment of (a); and
- (d) a nucleic acid fragment of (b).
10. The nucleic acid molecule of claim 5, wherein said nucleic acid molecule hybridizes under stringent conditions to a nucleotide sequence chosen from the group consisting of SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 40, 42, 44, 46, 48, 50, 52, 54 and 56 or a complement of said nucleotide sequence.
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11. The nucleic acid molecule of claim 5, wherein the nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of
- 20 (a) a first nucleotide sequence comprising a coding sequence differing by one or more nucleotide sequences from a coding sequence encoding said amino acid sequence, provided that no more than 20% of the nucleotides in the coding sequence in said first nucleotide sequence differ from said coding sequence;
- (b) an isolated second polynucleotide that is a complement of the first polynucleotide; and
- 25 (c) a nucleic acid fragment of (a) or (b).
12. A vector comprising the nucleic acid molecule of claim 11.
13. The vector of claim 12, further comprising a promoter operably-linked to said nucleic acid molecule.
- 30 14. A cell comprising the vector of claim 12.

15. An antibody that immunospecifically-binds to the polypeptide of claim 1.
16. The antibody of claim 15, wherein said antibody is a monoclonal antibody.
17. The antibody of claim 15, wherein the antibody is a humanized antibody.
18. A method for determining the presence or amount of the polypeptide of claim 1 in a  
5 sample, the method comprising:
- (a) providing the sample;
  - (b) contacting the sample with an antibody that binds immunospecifically to the polypeptide; and
  - (c) determining the presence or amount of antibody bound to said  
10 polypeptide,
- thereby determining the presence or amount of polypeptide in said sample.
19. A method for determining the presence or amount of the nucleic acid molecule of claim 5  
in a sample, the method comprising:
- (a) providing the sample;
  - 15 (b) contacting the sample with a probe that binds to said nucleic acid molecule; and
  - (c) determining the presence or amount of the probe bound to said nucleic acid molecule,
- thereby determining the presence or amount of the nucleic acid molecule in said  
20 sample.
20. A method of identifying an agent that binds to a polypeptide of claim 1, the method comprising:
- (a) contacting said polypeptide with said agent; and
  - (b) determining whether said agent binds to said polypeptide.
21. A method for identifying an agent that modulates the expression or activity of the  
25 polypeptide of claim 1, the method comprising:
- (a) providing a cell expressing said polypeptide;
  - (b) contacting the cell with said agent; and
  - (c) determining whether the agent modulates expression or activity of said  
30 polypeptide,

whereby an alteration in expression or activity of said peptide indicates said agent modulates expression or activity of said polypeptide.

22. A method for modulating the activity of the polypeptide of claim 1, the method comprising contacting a cell sample expressing the polypeptide of said claim with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptide.
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23. A method of treating or preventing a SECP-associated disorder, said method comprising administering to a subject in which such treatment or prevention is desired the polypeptide of claim 1 in an amount sufficient to treat or prevent said SECP-associated disorder in said subject.
- 5 24. The method of claim 23, wherein said subject is a human.
25. A method of treating or preventing a SECP-associated disorder, said method comprising administering to a subject in which such treatment or prevention is desired the nucleic acid of claim 5 in an amount sufficient to treat or prevent said SECP-associated disorder in said subject.
- 10 26. The method of claim 25, wherein said subject is a human.
27. A method of treating or preventing a SECP-associated disorder, said method comprising administering to a subject in which such treatment or prevention is desired the antibody of claim 15 in an amount sufficient to treat or prevent said SECP-associated disorder in said subject.
- 15 28. The method of claim 15, wherein the subject is a human.
29. A pharmaceutical composition comprising the polypeptide of claim 1 and a pharmaceutically-acceptable carrier.
30. A pharmaceutical composition comprising the nucleic acid molecule of claim 5 and a pharmaceutically-acceptable carrier.
- 20 31. A pharmaceutical composition comprising the antibody of claim 15 and a pharmaceutically-acceptable carrier.
32. A kit comprising in one or more containers, the pharmaceutical composition of claim 29.
33. A kit comprising in one or more containers, the pharmaceutical composition of claim 30.
34. A kit comprising in one or more containers, the pharmaceutical composition of claim 31.

35. The use of a therapeutic in the manufacture of a medicament for treating a syndrome associated with a human disease, the disease selected from a SECP-associated disorder, wherein said therapeutic is selected from the group consisting of a SECP polypeptide, a SECP nucleic acid, and a SECP antibody.
- 5 36. A method for screening for a modulator of activity or of latency or predisposition to a SECP-associated disorder, said method comprising:
- (a) administering a test compound to a test animal at increased risk for a SECP-associated disorder, wherein said test animal recombinantly expresses the polypeptide of claim 1;
  - (b) measuring the activity of said polypeptide in said test animal after administering
  - 10 the compound of step (a);
  - (c) comparing the activity of said protein in said test animal with the activity of said polypeptide in a control animal not administered said polypeptide, wherein a change in the activity of said polypeptide in said test animal relative to said control animal indicates the test compound is a modulator of latency or predisposition to a SECP-associated disorder.
- 15 37. The method of claim 36, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.
38. A method for determining the presence of or predisposition to a disease associated with
- 20 altered levels of the polypeptide of claim 1 in a first mammalian subject, the method comprising:
- (a) measuring the level of expression of the polypeptide in a sample from the first mammalian subject; and
  - (b) comparing the amount of said polypeptide in the sample of step (a) to the amount of the polypeptide present in a control sample from a second mammalian subject known not to
  - 25 have, or not to be predisposed to, said disease,
- wherein an alteration in the expression level of the polypeptide in the first subject as compared to the control sample indicates the presence of or predisposition to said disease.
39. A method for determining the presence of or predisposition to a disease associated with altered levels of the nucleic acid molecule of claim 5 in a first mammalian subject, the method
- 30 comprising:

(a) measuring the amount of the nucleic acid in a sample from the first mammalian subject; and

(b) comparing the amount of said nucleic acid in the sample of step (a) to the amount of the nucleic acid present in a control sample from a second mammalian subject known not to have or not be predisposed to, the disease;  
5 wherein an alteration in the level of the nucleic acid in the first subject as compared to the control sample indicates the presence of or predisposition to the disease.

40. A method of treating a pathological state in a mammal, the method comprising administering to the mammal a polypeptide in an amount that is sufficient to alleviate the  
10 pathological state, wherein the polypeptide is a polypeptide having an amino acid sequence at least 95% identical to a polypeptide comprising an amino acid sequence of at least one of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, and 18, or a biologically active fragment thereof.

41. A method of treating a pathological state in a mammal, the method comprising administering to the mammal the antibody of claim 15 in an amount sufficient to alleviate the  
15 pathological state.



# **POLYPEPTIDES AND POLYNUCLEOTIDES ENCODING SAME**

## **ABSTRACT**

The invention provides polypeptides, designated herein as SECP polypeptides, as well as polynucleotides encoding SECP polypeptides, and antibodies that immunospecifically- bind to SECP polypeptide or polynucleotide, or derivatives, variants, mutants, or fragments thereof. The invention additionally provides methods in which the SECP polypeptide, polynucleotide, and antibody are used in the detection, prevention, and treatment of a broad range of pathological states.

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## Drawings

**Figure 15. Nucleotide Sequence for CG106318-01.**

>CG106318-01 4810 nt  
GTCCATGGGGCCGATGTATGGGAGATGAATGTGGTCCCGGAGGCATCCAAACGAGGGCTG  
TGTGGTGTGCTCATGTGGAGGGATGGAACACTGACATACTAACTGTAAGCAGGCCGAGA  
GACCCAATAACCAGCAGAATTGTTTCAAAGTTTGGCATTGGCACAAGAGTTGTACGACT  
GGAGACTGGGACCTTGAATCAGTGTGAGCCCGTGATTTCAAAAGCCTAGAGAAACCTC  
TTGAGTGCATTAAGGGGGAAGAAGGTATTGAGGTGAGGGAGATAGCGTGCATCCAGAAAG  
ACAAAGACATTCTCGCGGAGGATATCATCTGTGAGTACTTTGAGCCCAAGCCTCTCCTGG  
AGCAGGCTTGCCTCATTCTTCCAGCAAGATTGCATCGTGTCTGAATTTCTGCCTGGT  
CCGAATGCTCCAGACCTGCGGAGCGGGCTCCAGCACCGGACGCGTGCATGTGGTGGCGC  
CCCCGAGTTCCGGAGGCTCTGGCTGTCCAAACCTGACGGAGTTCCAGGTGTGCCAATCCA  
GTCCATGCGAGGCCGAGGAGCTCAGGTACAGCCTGCATGTGGGGCCCTGGAGCACCTGCT  
CAATGCCCACTCCCGACAAAGTAAGACAGCAAGGAGACGCGGGAAGAATAAAGAAACGGG  
AAAAGGACCGCAGCAAAGGAGTAAAGGATCCAGAAGCCCGGAGCTTATTAAGAAAAAGA  
GAAACAGAGAACGGCAGAACAGACAAGAGAAACAAATTTGGGACATCCAGATTGGATATC  
AGACCAGAGAGGTTATGTGCATTAACAAGACGGGGAAAGCTGCTGATTTAAGCTTTTGCC  
AGCAAGAGAAGCTTCCAATGACCTTCCAGTCTGTGTGATACCAAAGAGTGGCAGGTTT  
CCGAGTGGTCAGAGTGGAGCCCTGCTCAAAAACATGCCATGACATGGTGTCCCTGCAG  
GCACTCGTGTAAAGACACGAACCATCAGGCAGTTTCCCATTTGGCAGTGAAGAGGAGTGT  
CAGAATTTGAAGAAAAAGAACCTGTTTGTCTCAAGGAGATGGAGTTGTCCCTGTGCCA  
CGTATGGCTGGAGAACTACAGAGTGGACTGAGTGCCGTGTGGACCCCTTGTCTCAGTCAGC  
AGGACAAGAGGCGCGCAACAGACGCGCCTCTGTGGAGGGGGCATCCAGACCCGAGAGG  
TGTAATGCGTGCAGGCCAACGAAAACCTCCTCTCACAATTAAGTACCCACAAGAACAAG  
AAGCCTCAAAGCCAATGGACTTAAATATGCACTGGACCTATCCCTAATACTACACAGC  
TGTGCCATTTCTTGTCCAACCTGAATGTGAAGTTTACCTTGGTCAGCTTGGGGACCTT  
GTACTTATGAAAACCTGAATGATCAGCAAGGGAAAAAGGCTTCAAACCTGAGGAAGCGGC  
GCATTACCAATGAGCCCACTGGAGGCTCTGGGGTAACCGAAACTGCCCTCACTTACTGG  
AAGCCATTCCCTGTGAAGAGCCTGCCTGTTATGACTGGAAGCGGTGAGACTGGGAGACT  
GCGAGCCAGATAACGGAAAGGAGTGTGGTCCAGGCACGCAAGTTCAAGAGGTTGTGTGCA  
TCAACAGTGATGGAGAAGAAGTTGACAGACAGCTGTGCAGAGATGCCATCTTCCCATCC  
CTGTGGCCTGTGATGCCCATGCCCCGAAAGACTGTGTGCTCAGCACATGGTCTACGTGGT  
CCTCCTGCTCACACACCTGCTCAGGGAAAACGACAGAAGGGAAACAGATACGAGCACGAT  
CCATTCTGGCCTATGCGGGTGAAGAAGGTGGAATTCGCTGTCCAAATAGCAGTGTCTTGC  
AAGAAGTACGAAGCTGTAATGAGCATCCTTGCACAGTGTACCACTGGCAAACCTGGTCCCT  
GGGGCCAGTGCATTGAGGACACCTCAGTATCGTCTTCAACACAACCTACGACTTGAATG  
GGGAGGCCCTCCTGCTGTGCGCATGCAGACAAGAAAGTCATCTGTGTGCGAGTCAATG  
TGGGCCAAGTGGGACCCAAAAAATGTCTGAAAGCCTTCGACCTGAAACTGTAAGGCCTT  
GTCTGCTTCCCTGTGAAGAAGGACTGTATTGTGACCCCATATAGTGAAGTGGACATCATGCC  
CCTCTTCTGTAAAGAAGGGGACTCCAGTATCAGGAAGCAGTCTAGGCATCGGGTCATCA  
TTCAGCTGACGCCCAACGGGGGCGGAGACTGCACAGATCCCTCTATGAAGAGAAGGCCT  
GTGAGGCACCTCAAGCGTGCCAAAGCTACAGGTGGAAGACTCACAATGGCGCAGATGCC  
AATTAGTCCCTTGGAGCGTGAACAAGACAGCCCTGGAGCACAGGAAGGCTGTGGGCCTG  
GGCGACAGGCAAGAGCCATTACTTGTGCAAGCAAGATGGAGGACAGGCTGGAATCCATG  
AGTGCCTACAGTATGCAGGCCCTGTGCCAGCCCTTACCCAGGCCCTGCCAGATCCCTGCC  
AGGATGACTGTCAATTGACCAGCTGGTCCAAGTTTCTTCATGCAATGGAGACTGTGGTG  
CAGTTAGGACCAGAAAGCGCACTCTTGTGGAAAAAGTAAAAAGAAGGAAAAATGTAAAA  
ATTCCCATTGTATCCCTGATTGAGACTCAGTATTGTCTTGTGACAAATATAATGCAC  
AACCTGTGGGGAACCTGGTCAGACTGTATTTACCAGAGGGAAAAAGTGAAGTGTGCTGG  
GAATGAAAGTACAAGGAGACATCAAGGAATGCGGACAAGGATATCGTTACCAAGCAATGG  
CATGCTACGATCAAAATGGCAGGCTTGTGGAACATCTAGATGTAAACAGCCATGGTTACA  
TTGAGGAGGCCCTGCATATCCCTGCCCTCAGACTGCAAGCTCAGTGAGTGGTCCAAC  
GGTCGCGCTGCAGCAAGTCTGTGGGAGTGGTGTGAAGTTCTGTTCTAAATGGCTGCGTG  
AAAAACCATATAATGGAGGAAGGCCCTTGGCCCAACTGGACCATGTCAACAGGCACAGG  
TGATGAGGTTGTCCCATGCCACAGTGAAGTCAACCACTACCTATGGGTGCAGAGCCCT  
GGAGCATCTGCAAGGTGACCTTTGTGAATATGCGGGAGAAGTGTGGAGAGGGCGTGCAAA  
CCGAAAAGTGAGATGCATGCAGAATACAGCAGATGGCCCTTCTGAACATGTAGAGGATT  
ACCTCTGTGACCCAGAAGAGATGCCCTGGGCTCTAGAGTGTGCAAAATACCATGCCCTG  
AGGACTGTGATATCTGAATGGGTCCATGGACCAATGTGTTTGGCTTGAATCAAA  
GCAGTTTCCGGCAAGGTGAGCTGATCCCATCAGACAACAGCTGATGAAGGAAGATCTT  
GCCCTAATGCTGTTGAGAAAGAACCCTGTAACCTGAACAAAAACTGCTACCACTATGATT  
ATAATGTAACAGACTGGAGTACATGTCAGCTGAGTGAGAAGGCAGTTTGTGGAATGGAA  
TAAAAACAAGGATTTGGATTGTGTTTGAAGTGTGGAAGTGTGGAAGTGTGGAATGAA  
GTGAAGCGCTTGGCTTGGAGAAGAACTGGCAGATGAACACGTCCTGTCATGGTGAATGCC  
CTGTGAAGTGTGAGCTTTCTGATTGGTCTCCTTGGTCAGAATGTTCTCAACATGTGGCC

TCACAGGAAAAATGATCCGAAGACGAACAGTGACCCAGCCCTTTCAAGGTGATGGAAGAC  
CATGCCCTTCCCTGATGGACAGTCCAAACCTGCCAGTGAAGCCTTGTATCGGTGGC  
AATATGGCCAGTGGTCTCCATGCCAAGTGCAGGAGGCCAGTGTGGAGAAGGGACCAGAA  
CAAGGAACATTTCTTGTGTAGTAAGTGATGGGTGAGCTGATGATTTAGCAAAAGTGGTGG  
ATGAGGAATTCTGTGCTGACATTGAACTCATTATAGATGGTAATAAAAAATGGTTCTGG  
AGGAATCCTGCAGCCAGCCTTGCCAGGTGACTGTTATTTGAAGGACTGGTCTTCTGGA  
GCCTGTGTGAGCTGACCTGTGTGAATGGTGAGGATCTAGGCTTTGGTGGAATACAGGTCA  
GATCCAGACCCGGTGATTATACAAGAACTAGAGAATCAGCATCTGTGCCAGAGCAGATGT  
TAGAAACAAAATCATGTTATGATGGACAGTGCTATGAATATAAATGGATGGCCAGTGCTT  
GGAAGGGCTCTTCCCGAACAGTGTGGTGTCAAAGGTGAGTGGTATAAATGTAACAGGGG  
GCTGCTTGGTGATGAGCCAGCCTGATGCCGACAGGTCTTGTAAACCCACCGTGTAGTCAAC  
CCCCTCGTACTGTAGCGAGACAAAAACATGCCATTGTGAAGAAGGGTACACTGAAGTCA  
TGTCTTCTAACAGCACCTTGTAGCAATGCACACTTATCCCCGTGGTGGTATTACCCACCA  
TGGAGGACAAAAGAGGAGATGTGAAAACCAAGTCGGGCTGTACATCCAACCCAACCTCCA  
GTAACCCAGCAGGACGGGGAAGGACCTGGTTTCTACAGCCATTGGGCCAGATGGGAGAC  
TAAAGACCTGGGTTTACGGGTGTAGCAGCTGGGGCATTGTGTTACTCATCTTTATTGTCT  
CCATGATTTATCTAGCTTGTAAAAAGCCAAAGAAACCCCAAGGAAGGCAAAACAACCGAC  
TGAACCTTTAACCTTAGCCTATGATGGAGATGCCGACATGTAACATATAACTTTTCTG  
GCAACAACCA (SEQ ID NO: 40)

Protein Sequence for CG106318-01 ORF Start: 18 ORF Stop: 4782 Frame: 3

Protein Sequence:

>CG106318-01-prot 1588 aa  
MGDECGPGGIQTRAVWCAHVEGWTLHTNCKQAERPNNQNCQKVCWDWHKELYDWRLGPW  
NQCQPVISKLEKPLECIKGEIGQVREIACIQKDKDIPAEDIICEYFEPKPLLEQACLI  
PCQQDCIVSEFSAWSECSKTCGSLQHRTRHVAPPQFGGSGCPNLTEFQVCQSSPCEAE  
ELRYSLSHVGVPSTCSMPHSRQVRQARRRGKNKEREDRSKGVKDPPEARLIKKNRNRQ  
NRQENKYWDIQIGYQTRVEMCINKTGKAADLSFCQQEKLPMTFQSCVITKECQVSEWSEW  
SPCSKTCHDMVSPAGTRVTRTRIRQFPISGECEPEFEEKEPCLSQGDGVVPCATYGWRT  
TEWTECRVDPLLSQQDKRRGNQALCGGGIQTREYVCVQANENLLSQLSTHKNKEASKPM  
DLKLCTGPIPNNTQLCHIPCTECEVSPWSAWGPCTYENCNDQQGGKGFKLRRRITNEP  
TGGSGVTGNCPHLEAIPCEEPACYDVKAVRLGDCEPDNGKECGPGTQVQEVVCINSOGE  
EVDRLQLCRDAIFPIVACDAPCPKDCVLSTWSTWSSCSHTCSGKTTGKQIRARSILAYA  
GEEGGIRCPNSSLQEVRSNEHPCTVYHWQTGPWGGCIEDTSVSSFNTTTTWNGEASCS  
VGMQTRKVICVRVNVGQVGPKKCPESLRPETVRPCLLPCKKDCIVTPYSDWTSCPSSCKE  
GDSSIRKQSRHRVLIQPLANGGRDCTDPLYEEKACEAPOACQSYRWKTHKWRRCLVPWS  
VQQDSPGAQEGCGPGRQARAITCRKQDGGQAGIHECLQYAGPVPALTOACQIPQDDCQL  
TSWSKFSSCNGDCGAVRTRKRTLVGKSKKKECKNSHLYLIETQYCPDKYNAQPVGNW  
SDCILPEGKVEVLLGMKVQDQIECGQGYRYQAMACYDQNGRLVETSRCSHGYIEEACI  
IPCPSDCKLSEWSNWSRCSKSCGSGVKVRSKWLREKPYNGGRPCKLDHVNQAQVYEVVP  
CHSDCNQYLWVTEPWSICKVTFVNMRENCGE3VQTRKVRMCQNTADGPSEHVEDYLCDPE  
EMPLGSRVCKLPCPEDCVISEWGPWTQCVLPCNQSSFRQRSADPIRQPADEGRSCPNAVE  
KEPCNLNKNKYHYDYNVTDWSTCQLSEKAVCGNGIKTRMLDCVRSKGKSVDLKYCEALGL  
EKNWQMNTSCMVECPVNCQLSDWSPWSECSQTCGLTGKMIARRRTVTQPFQGDGRPCPSLM  
DQSKPCPVKPCYRWQYQWSPCQVQEAQCGEGTRTRNISCVSDGSADDFSKVVDDEEFA  
DIELIIDGNKMMVLEESCSQPCPGDCYLKDWSSWSLQCLTCVNGEDLGGGIIQVRSRPVI  
IQELENOHLCPQMLETKSCYDGCYQYKWMASAWKGSSRTVWCQRSDGINVTGGCLVMS  
QPDADRSCNPPCSQPHSYCSETKTCHCEEYETVMSSNSTLEQCTLIPVVVLPMTMEDKRG  
DVKTSRAVHPTQPSSNPAGRGRTWLQPFPGDGRKLTWVYGAAGAFVLLIFIVSMIYLA  
CKKPKPKQRRQNNRLKPLTLAYDGDADM (SEQ ID NO: 41)

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Figure 16. Nucleotide and Protein Sequences for CG50817-04.

>CG50817-04 1447 nt  
 GCGGACACCAAGTGATGCTCCTGGGACCCTACGCAATCTGCGCCTGCGTCTCATCAGTCGC  
 CCCACATGTAAGTGTATCTACAACCAGCTGCACCAGCGACACCTGTCCAACCCGGCCCGG  
 CCTGGGATGCTATGTGGGGGCCCCAGCCTGGGGTGCAGGGCCCTGTCAGGTCTGATAG  
 GGAGAAGAGAAGGAGCAGAAGGGGAGGGGCCTAACCTGGGCTGGGGGTTGGAATCACAG  
 GACTGGGGGAAAGAGCTGCAATCAGAGGTGTCTGCCATAGCTGGGCTCAGGCATCTGTC  
 CTTGGCTTTGTTGCCCTGGCTCCAGGGAGATTCCGGGGGCCCTGTGCTGTGCCTCGAGCCT  
 GACGGACACTGGGTTTCAGGCTGGCATCATCAGCTTTGCATCAAGCTGTGCCAGGAGGAC  
 GCTCCTGTGCTGCTGACCAACACAGCTGCTCACAGTTCCTGGCTGCAGGCTCGAGTTCAG  
 GGGGCAGCTTTCTGGCCCAGAGCCCAGAGACCCCGAGATGAGTGATGAGGACAGCTGT  
 GTAGCCTGTGGATCCTTGAGGACAGCAGGTCCCCAGGCAGGAGCACCTCCCCATGGCCC  
 TGGGAGGCCAGGCTGATGCACCAGGGACAGCTGGCCTGTGGCGAGCCCTGGTGTGAGAG  
 GAGGCGGTGCTAACTGCTGCCCCTGCTTCATTGGGCGCCAGGCCCCAGAGGAATGGAGC  
 GTAGGGCTGGGGACAGACCGGAGGAGTGGGGCCTGAAGCAGCTCATCCTGCATGGAGCC  
 TACACCCACCCTGAGGGGGGCTACGACATGGCCCTCCTGCTGCTGGCCAGCCTGTGACA  
 CTGGGAGCCAGCCTGCGGCCCTCTGCCTGCCCTATGCTGACCACCACCTGCCTGATGGG  
 GAGCGTGGCTGGGTTCTGGGACGGGCCCCGCCAGGAGCAGGCATCAGCTCCCTCCAGACA  
 GTGCCCGTGACCTCCTGGGGCCTAGGGCCTGCAGCCGGCTGCATGCAGCTCCTGGGGGT  
 GATGGCAGCCCTATTCTGCCGGGGATGGTGTGTACAGTGCTGTGGGTGAGCTGCCCAGC  
 TGTGAGGCCAACCAACCAGCTGCTGACAGGGGACCTGGCCATTCTCAGGAACAAGAGAAT  
 GCAGGCAGGCAAAATGGCATTACTGCCCCTGTCTCCCCACCCTGTCATGTGTGATTCCAG  
 GCACCAGGGCAGGCCAGAGCCAGCAGCTGTGGGAAGGAACCTGCCTGGGGCCACAGG  
 TGCCCACTCCCCACCCTGCAGGACAGGGGTGTCTGTGGACACTCCCACACCCAACCTGTC  
 TACCAAGCAGGCGTCTCAGCTTTCTCCTCCTTTACCCTTCAGATACAATCACGCCAGC  
 CACGTTGTTTGAATAATTTCTTTTGGGGGGCAGCAGTTTCTTTTAACTTAA  
 ATAAATT (SEQ ID NO:42)

**Protein Sequence for CG50817-04 ORF Start: 520 ORF Stop: 1192 Frame: 1**

Protein Sequence:

>CG50817-04-prot 224 aa  
 MSDEDSVCAGSLRTAGPQAGAPSPWPWEARLMHQQLACGGALVSEEAVLTAHCFIGR  
 QAPEEWSVLGTRPEEWGLKQLLHGAYTHPEGGYDMALLLLAQPVTLGASLRPLCLPYA  
 DHHLDPGERGWVLGRARPGAGISSLQTVPTLLGPRACSRHLAAPGGDGPILPGMVCTS  
 AVGELPSCEANQPAADRPGHSQEENAGRQMALPLSSPPCHV (SEQ ID NO:43)

**Figure 17. Nucleotide and Protein Sequences for CG50817-05.**

**5 . Nucleotide sequence encoding the Peptidase-like protein of the invention.**

>CG50817-05  
 CGCTGGGCCTCTGTCCTGATGCTGCTGAGCTCCCTGGTGTCTCTCGCTGGTTCTGTCTAC 60  
 CTGGCCTGGATCCTGTTCTTCGTGCTCTATGATTTCTGCATTGTTTGTATCACACCTAT 120  
 GCTATCAACGTGAGCCTGATGTGGCTCAGTTTCCGGAAGGTCCAAGAACCCAGGGCCAA 180  
 10 CCCAAGCCTCAGGAGGGCAACACAGTCCCTGGCGAGTGGCCCTGGCAGGCCAGTGTGAGG 240  
 AGGCAAGGAGGCCACATCTGCAGCGGCTCCCTGGTGGCAGACACCTGGGTCTCACTGCT 300  
 GCCCACTGCTTTGAAAAGGCAGCAGCAACAGAACTGAATTCCTGCGTGAGGGACTCAGCC 360  
 CCTGGGGCCGAAGAGGTGGGGGTGGCTGCCCTGCAGTTGCCAGGGCCTATAACCACTAC 420  
 AGCCAGGGCTCAGACCTGGCCCTGCTGCAGCTCGCCACCCACGACCCACACACCCCTC 480  
 15 TGCCTGCCCCAGCCCCGCCATCGCTTCCCCCTTTGGAGCCTCCTGCTGGGCCACTGGCTGG 540  
 GATCAGGACACCAGTGATGCTCCTGGGACCCTACGCAATCTGCGCCTGCGTCTCATCAGT 600  
 CGCCCCACATGTAAGTGTATCTACAACCAGCTGCACCAGCGACACCTGTCCAACCCGGCC 660

CGGCCTGGGATGCTATGTGGGGGCCCCAGCCTGGGGTGCAGGGCCCCTGTCAGGGAGAT 720  
TCCGGGGGCCCTGTGCTGTGCCTCGAGCCTGACGGACACTGGGTTCAAGCTGGCATCATC 780  
AGCTTTGCATCAAGCTGTGCCAGGAGGACGCTCCTGTGCTGCTGACCAACACAGCTGCT 840  
CACAGTTCCTGGCTGCAGGCTCGAGTTCAGGGGGCAGCTTTCCTGGCCCAGAGCCCAGAG 900  
5 ACCCCGGAGATGAGTGATGAGGACAGCTGTGTAGCCTGTGGATCCTTGAGGACAGCAGGT 960  
CCCCAGGCAGGAGCACCTCCCATGGCCCTGGGAGGCCAGGCTGATGCACCAGGGACAG 1020  
CTGGCCTGTGGCGGAGCCCTGGTGTGAGAGGAGGCGGTGCTAACTGCTGCCCACTGCTTC 1080  
ATTGGGCGCCAGGCCCCAGAGGAATGGAGCGTAGGGCTGGGGACCAGACCGGAGGAGTGG 1140  
GGCCTGAAGCAGCTCATCCTGCATGGAGCCTACACCCACCCTGAGGGGGGCTACGACATG 1200  
10 GCCCTCCTGCTGCTGGCCCAGCCTGTGACACTGGGAGCCAGCCTGCGGCCCTCTGCCTG 1260  
CCCTATGCTGACCACCACCTGCCTGATGGGGAGCGTGGCTGGGTTCTGGGACGGGCCCCG 1320  
CCAGGAGCAGGCATCAGCTCCCTCCAGACAGTGCCCGTGACCCTCCTGGGGCCTAGGGCC 1380  
TGCAGCCGGCTGCATGCAGCTCCTGGGGGTGATGGCAGCCCTATTCTGCCGGGGATGGTG 1440  
TGTACCAGTGCTGTGGGTGAGCTGCCAGCTGTGAGGCCAACCAACCAGCTGCTGACAGG 1500  
15 GGACCTGGCCATTCTCAGGAACAAGAGAATGCAGGCAGGCAAATGGCATTACTGCCCTG 1560  
TCCTCCCCACCCTGTCATGTGTGATTCCAGGC 1592  
(SEQ ID NO:44)

**Protein sequence encoded by the coding sequence shown above.**

>CG50817-05  
20 MLLSSVLVSLAGSVYLAWILFFVLYDFCIVCITTYAINVSLMWLSFRKVQEPQGQPKPQEG 60  
NTVPGIEWPWQASVRRQGAHICSGSLVADTWVLTAAHCFEKAATELNSCVRDSAPGAEEV 120  
GVAALQLPRAYNHYSQSDLLALLQLAHPTTHTPLCLPQPAHRFPFGASCWATGWDQDTS 180  
APGTLRLRLRLISRPTCNCIYNQLHQRHLSNPARPGMLCGGPQPGVQGPCQDSSGGPVL 240  
CLEPDGHWVQAGIISFASSCAQEDAPVLLTNTAAHSSWLQARVQGAFLAQSPETPEMSD 300  
25 EDSCVACGSLRTAGPQAGAPSPWPWEARLMHQGLACGGALVSEAVLTAHCFIGRQAP 360  
EEWSVGLGTRPEEWGLKQLILHGAYTHPEGGYDMALLLAQPVTLGASLRPLCLPYADHH 420  
LPDGERGWVLGRARPGAGISSLQTVPTLLGPRACSRHLAAPGGDGPILPGMVCTSAVG 480  
ELPSCEANQPAADRGPGHSGEQENAGRQMALLPLSSPPCHV 521  
(SEQ ID NO:45)

**Figure 18. Nucleotide and Protein Sequences for CG50817-06.**

**Nucleotide sequence encoding the Peptidase-like protein of the invention.**

>CG50817-06  
AGCGACACCTGTCCAACCCGGCCCGGCCTGGGATGCTATGTGGGGGCCCCAGCCTGGGG 60  
TGCAGGGCCCCTGTCAGGGAGATTCCGGGGGCCCTGTGCTGTGCCTCGAGCCTGACGGAC 120  
35 ACTGGGTTCAAGCTGGCATCATCAGCTTTGCATCAAGCTGTGCCAGGAGGACGCTCCTG 180  
TGCTGCTGACCAACACAGCTGCTCACAGTTCCTGGCTGCAGGCTCGAGTTCAGGGGGCAG 240  
CTTTCCTGGCCCAGAGCCCAGAGACCCCGGAGATGAGTGATGAGGACAGCTGTGTAGCCT 300  
GTGGATCCTTGAGGACAGCAGGTCCCGAGGAGGAGCACCCTCCCATGGCCCTGGGAGG 360  
CCAGGCTGATGCACCAAGGACAGCTGGCCTGTGGCGGAGCCCTGGTGTGAGAGGAGCGG 420  
40 TGCTAACTGCTGCCCACTGCTTCATTGGGCGCCAGGCCCCAGAGGAATGGAGCGTAGGGC 480  
TGGGGACCAGACCGGAGGAGTGGGGCCTGAAGCAGCTCATCCTGCATGGAGCCTACACCC 540  
ACCCTGAGGGGGGCTACGACATGGCCCTCCTGCTGCTGGCCAGCCTGTGACACTGGGAG 600  
CCAGCCTGCGGGCCCCTCTGCCTGCCCTATGCTGACCACCACCTGCCTGATGGGGAGCGTG 660  
GCTGGGTTCTGGGACGGGCCCCGCCCAGGAGCAGGCATCAGCTCCCTCCAGACAGTGCCCG 720  
45 TGACCCTCCTGGGGCCTAGGGCCTGCAGCCGGCTGCATGCAGCTCCTGGGGGTGATGGCA 780  
GCCCTATTCTGCCGGGGATGGTGTGTACCACTGCTGTGGGTGAGCTGCCAGCTGTGAGG 840  
CCAACCAACCAGCTGCTGACAGGGGACCTGGCCATTCTCAGGAACAAGAGAATGCAGGCA 900  
GGCAAATGGCATTACTGCCCCTGTCTCCCCACCCTGTCTGTGATTCCAGGCACCAG 960  
GGCAGGCCCCAGAACCCAGCAGCTGTGGGAACCAACCTGCCTGGGGCCACAGGTGCCAC 1020  
50 TCCCCACCCTGACAGGACAGGGGTGTCTGTGGACACTCCCACACCCAACCTCTGCTACCAAG 1080  
CAGGCGTCTCAGCTTTCCTCCTCTTTACCTTTTCAGATACAATCACGCCAGCCACGTTG 1140  
TTTTGAAAATTTCTTTTTTGGGGGGCAGCAGTTTTCTTTTTTAACTTAAATAAATT 1200  
(SEQ ID NO:46)

**Protein sequence encoded by the coding sequence shown above.**

>CG50817-06  
55 MLCGGPQPGVQGPCQDSSGGPVLCLPDGHWVQAGIISFASSCAQEDAPVLLTNTAAHSS 60  
WLQARVQGAFLAQSPETPEMSDEDSVACGSLRTAGPQAGAPSPWPWEARLMHQGLAC 120

GGALVSEEA VLTA AHCFIGRQAP EEW SVGLTRPEEWGLKQLILHGAYTHPEGGYDMALL 180  
 LLAQPVTLGASLRPLCLPYADHHLDPDGERGWVLGRARPGAGISSLQTVPTLLGPRACSR 240  
 LHAAPGGDGSPILPGMVCTSAVGELPSCEANQPAADRGP GHSQEENAGROMALLPLSSP 300  
 PCHV 304  
 (SEQ ID NO:47)

**Figure 19. Nucleotide and Protein Sequences For CG51099-03.**

**Nucleotide sequence encoding the Serine Protease-like protein of the invention.**

>CG51099-03  
 10 CGGAGAGACGCAGTCGGCTGCCACCCCGGGATGGGTCGCTGGTGCCAGACCGTCGCGCGC 60  
 GGGCAGCGCCCCCGACGTCTGCCCCCTCCCGCGCCGGTGCCCTGCTGCTGCTGCTTCTG 120  
 TTGCTGAGGTCTGCAGGTGCTGGGGCGCAGGGGAAGCCCCGGGGGCGCTGTCCACTGCT 180  
 GATCCCGCCGACACAGAGCGTCCAGTGTGTCCCAAGGCCACCTGTCTTCCAGCCGGCCT 240  
 CGCCTTCTCTGGCAGACCCCGACCCAGACACTGCCCTCGACCACCATGGAGACCCAA 300  
 15 TTCCCAAGTTTCTGAAGGCAAAGTCGACCCATAACCGCTCCTGTGGCTTTTCTACGAGCAG 360  
 GACCCACCCCTCAGGGACCCAGAAGCCGTGGCTCGGCGGTGGCCCTGGATGGTCAGCGTG 420  
 CGGGCCAATGGCACACACATCTGTGCGGCACCATCATTGCCCTCCAGTGGGTGCTGACT 480  
 GTGGCCCACTGCCTGATCTGGCGTGATGTTATCTACTCAGTGAGGGTGGGGAGTCCGTGG 540  
 ATTGACCAGATGACGCAGACCGCTCCGATGTCCCGGTGCTCCAGGTCATCATGCATAGC 600  
 20 AGGTACCGGGCCAGCGGTTCTGGTCTGGGTGGGCCAGGCCAAGACATCGGCCTCCTC 660  
 AAGTCAAGCAGGAACCAAGTACAGCAATTACGTGCGGCCCATCTGCCTGCCGTGGCAGC 720  
 GACTATGTGTTGAAGGACCATTCGCGCTGCACTGTGACGGGCTGGGGACTTTCCAAGGCT 780  
 GACGGCATGTGGCCTCAGTTCGGGACCATTCAGGAGAAGGAAGTCATCATCCTGAACAAC 840  
 AAAGAGTGTGACAATTTCTACCACAACCTTCACCAAAATCCCCACTCTGGTTTCAGATCATC 900  
 25 AAGTCCAGATGATGTGTGCGGAGGACACCCACAGGGAGAAGTTCTGCTATGAGCTAACT 960  
 GGAGAGCCCTTGGTCTGCTCCATGGAGGGCACGTGGTACCTGGTGGGATTGGTGAGCTGG 1020  
 GGTGACGGCTGCCAGAAGAGCGAGGCCCCACCCATCTACCTACAGGTCTCCTCCTACCAA 1080  
 CACTGGATCTGGGACTGCCTCAACGGGCAGGCCCTGGCCCTGCCAGCCCCATCCAGGACC 1140  
 CTGCTCCTGGCACTCCCACTGCCCTCAGCCTCCTTGCTGCCCTCTGACTCTGTGTGCCC 1200  
 30 TCCCTCACTTGTGA 1214  
 (SEQ ID NO:48)

**Protein sequence encoded by the nucleotide sequence shown above.**

>CG51099-03  
 35 MGRWCQTVARQQRPTSAPSRAGALLLLLLLLRSAGCWGAGEAPGALSTADPADQSVQCV 60  
 PKATCPSSRPRLWQTPTTQTLPTTMTQFPVSEGVDPYRSCGFSYEQDPTLRDPEAV 120  
 ARRWPMVSVRANGWVLTVAHCLIVRDVYISVRVGSPPWIDQMTQTASD 180  
 VPLVQVIMHSRYRAQRFWSWVGQANDIGLLKLKQELKYSNYVRPICLPDGYVLKDH SRC 240  
 TVTGWGLSKADGMWPQFRTIQEKEVILNNKECDNFYHNFTKIPTLVQIIKSQMMCAEDT 300  
 40 HREKFCYELTGEPLVCSMEGTWYLVGLVSWGAGCQKSEAPPIYLQVSSYQHWIWDCLNGQ 360  
 ALALPAPSRLLLLALPLSLAAL 385 (SEQ ID NO:49)

**Figure 20. Nucleotide and Protein Sequences For CG57051-04.**

**Nucleotide sequence encoding the Angiopoietin-like protein, CG57051-04.**

>CG57051-04  
 45 TGCGGATCCTCACACGACTGTGATCCGATTCTTTCCAGCGGCTTCTGCAACCAAGCGGGT 60  
 CTTACCCCGGCTCCTCCGCGTCTCCAGTCTCGCACCTGGAACCCCAACGTCCCCGAGAG 120  
 TCCCGGAATCCCGCGTCCAGGCTACCTAAGAGGATGAGCGGTGCTCCGACGGCCGGGGC 180  
 AGCCCTGATGCTCTGCGCCGCCACCGCCGTGCTACTGAGCGCTAGATCTGGACCCGTGCA 240  
 50 GTCCAAGTCGCCGCGCTTTGCGTCTGGGACGAGATGAATGTCCTGGCGCACGGACTCCT 300  
 GCAGCTCGGCCAGGGGCTGCGCGAACACGCGGAGCGCACCCGAGTCAGCTGAGCGCGCT 360

GGAGCGGCGCCTGAGCGCGTGCGGGTCCGCCTGTCAGGGAACCGAGGGGTCCACCGACCT 420  
 CCCGTTAGCCCCTGAGAGCCGGGTGGACCCTGAGGTCCTTCACAGCCTGCAGACACAACCT 480  
 CAAGGCTCAGAACAGCAGGATCCAGCAACTCTTCCACAAGGTGGCCCAGCAGCAGCGGCA 540  
 CCTGGAGAAGCAGCACCTGCGAATTCAGCATCTGCAAAGCCAGTTTGGCCTCCTGGACCA 600  
 5 CAAGCACCTAGACCATGAGGTGGCCAAGCCTGCCGAAGAAAGAGGCTGCCCGAGATGGC 660  
 CCAGCCAGTTGACCCGGCTACAATGTCAGCCGCTGCACCGAGGCTGGTGGTTTGGCAC 720  
 CTGCAGCCATTCCAACCTCAACGGCCAGTACTTCCGCTCCATCCCACAGCAGCGGCAGAA 780  
 GCTTAAGAAGGGAATCTTCTGGAAGACCTGGCGGGGCGCTACTACCCGCTGCAGGCCAC 840  
 CACCATGTTGATCCAGCCCATGGCAGCAGAGGCAGCCTCCTAGCGTCTGGCTGGGCCTG 900  
 10 GTCCCAGGCCACGAAAGACGGTGACTCTTGGCTCTG 937 (SEQ ID NO:50)

**Protein sequence encoded by the nucleotide sequence shown above.**

>CG57051-04  
 MSGAPTAGAALMLCAATAVLLSARSGPVQSKSPRFASWDEMNVLAHGLLQGLREHAE 60  
 15 RTRSQLSALERRLSACGSACQGTEGSTDLPAPESRVDPEVLHSLQTQLKAQNSRIQQLF 120  
 HKVAQQQRHLEKQHLRIQHLQSQFGLLDHKHLDHEVAKPARRKRLPEMAQPVDPAHNVSR 180  
 LHRGWVFGTCSHNSNLNGQYFRSIPQQRQKLKKGIFWKTWRGRYYPLQATTMLIQPMAAEA 240  
 AS 242 (SEQ ID NO:51)

## 20 **Figure 21. Nucleotide and Protein Sequences For CG57051-05.**

Nucleotide sequence encoding the Angiopoietin-like protein, CG57051-05.

>CG57051-05  
 CTTGCTCTCCAGTCTCGCACCTGGAACCCCAACGTCCTCCGAGAGTCCCGGAATCCCGC 60  
 25 TCCCAGGCTACCTAAGAGGATGAGCGGCGCTCCGACGGCCGGGCAGCCCTGATGCTCTG 120  
 CGCCGCCACCGCGTGCTACTGAGCGCTCAGGGCGGACCCGTGCAGTCCAAGTCGCGCG 180  
 CTTTGGCTCTGGGACGAGATGAATGTCTGGCGCACGGACTCCTGCAGCTCGGCCAGGG 240  
 GCTGCGCGAACACGCGGAGCGCACCCGCAGTCAGCTGAGCGCGCTGGAGCGGCGCCTGAG 300  
 CGCGTGGCGGTCCGCTGTGTCAGGGAACCGAGGGGTCCACCGACTCCCGTTAGCCCTGA 360  
 GAGCCGGGTGGACCTGAGGTCTTACAGCCTGCAGACACAACCTCAAGGCTCAGAACAG 420  
 30 CAGGATCCAGCAACTCTTCCACAAGGTGGCCAGCAGCAGCGGCACCTGGAGAAGCAGCA 480  
 CCTGCGAATTCAGCATCTGCAAAGCCAGTTTGGCTCCTGGACCACAAGCACCTAGACCA 540  
 TGAGGGTGGCAAGCCTGCCGAAGAAAGAGGCTGCCGAGATGGCCAGCCAGTTGACCC 600  
 GGCTCACAAATGTAGCCGCTGCACCATGGAGGCTGGACAGTAATTCAGAGGCGCCACGA 660  
 TGGCTCAGTGGACTTCAACCGGCCCTGGGAAGCCTACAAGCGGGGTTTGGGGATCCCCA 720  
 35 CGGCGAGTTCTGGCTGGGTCTGGAGAAGGTGCATAGCATCATGGGGGACCGCAACAGCCG 780  
 CCTGGCCGTGCAGCTGCGGGACTGGGATGGCAACGCGAGTTGCTGCAGTTCTCCGTGCA 840  
 CCTGGGTGGCGAGGACACGGCTATAGCCTGCAGTCACTGCACCCGTGGCCGGCCAGCT 900  
 GGGCGCCACCACCGTCCCACCCAGCGGCTCTCCGTACCTTCTCCACTTGGGACCAGGA 960  
 TCACGACCTCCGAGGACAAGAAGTGCAGCAAGAGCCTCTCTGGAGGCTGGTGGTTTGG 1020  
 40 CACCTGCAGCCATTCCAACCTCAACGGCCAGTACTTCCGCTCCATCCCACAGCAGCGGCA 1080  
 GAAGCTTAAGAAGGGAATCTTCTGGAAGACCTGGCGGGGCGCTACTACCCGCTGCAGGC 1140  
 CACCACCATGTTGATCCAGCCCATGGCAGCAGAGGCAGCCTCCTAGCGTCTGGCTGGGC 1200  
 CTGGTCCCGAGGCCACGAAAGAGGTGACTCTTGGCTCTG 1239 (SEQ ID NO:52)

Protein sequence for Angiopoietin-like protein, CG57051-05.

45 >CG57051-05  
 MSGAPTAGAALMLCAATAVLLSAQGGPVQSKSPRFASWDEMNVLAHGLLQGLREHAE 60  
 RTRSQLSALERRLSACGSACQGTEGSTDLPAPESRVDPEVLHSLQTQLKAQNSRIQQLF 120  
 50 HKVAQQQRHLEKQHLRIQHLQSQFGLLDHKHLDHEGGKPARRKRLPEMAQPVDPAHNVSR 180  
 LHHGGWTVIQRHDGSDVFNRPWEAYKAGFGDPHGEFVWLGLEKVHSMGDRNSRLAVQLR 240  
 DWDGNAELLQFVHLGSEDYSLQLTAPVAGQLGATTVPSPGLSVFSTWDQDHLRRD 300  
 KNCAKSLSGGWVFGTCSHNSNLNGQYFRSIPQQRQKLKKGIFWKTWRGRYYPLQATTMLIQ 360  
 PMAAEAS 368 (SEQ ID NO:53)

## **Figure 22. Nucleotide and Protein Sequences For CG57051-02.**

55 **Nucleotide sequence encoding the Angiopoietin-like protein of the invention.**

>CG57051\_02  
 TGGCGATCCTCACACGACTGTGATCCGATTCTTTCCAGCGGCTTCTGCAACCAAGCGGGT 60  
 CTTACCCCCGGTCTCCGCGTCTCCAGTCTCCGACCTGGAACCCCAACGTCCCCGAGAG 120  
 TCCCCGAATCCCCGCTCCAGGCTACCTAAGAGGATGAGCGGTGCTCCGACGGCCGGGC 180  
 5 AGCCCTGATGCTCTGCGCCGCCACCGCGTGCTACTGAGCGCTAGATCTGGACCCGTGCA 240  
 GTCCAAGTCGCCGCGCTTTGCGTCTGCGGACGAGATGAATGCTGCGGCACGGACTCCT 300  
 GCAGCTCGGCCAGGGGCTGCGCGAACACGCGGAGCGCACCCGAGTCAGCTGAGCGCGCT 360  
 GGAGCGGCGCTGAGCGCGTGC GGGTCCGCTGTGTCAGGGAACCGAGGGTCCACCGACCT 420  
 CCGGTTAGCCCTGAGAGCGGGTGGACCTGAGGTCTTCACAGCCTGCAGACACAACCT 480  
 10 CAAGGCTCAGAACAGCAGGATCCAGCAACTCTTCCACAAGGTGGCCAGCAGCAGCGCA 540  
 CCTGGAGAAGCAGCACCTGCCAATTGAGCATCTGCAAAGCCAGTTTGGCTCCTGGACCA 600  
 CAAGCACCTAGACCATGAGGTGGCCAAACCTGCCCCAAGAAAGAGGCTGCCCGAGATGGC 660  
 CCAGCCAGTTGACCCGGCTCACAATGTGACCGCGCTGCACCATGGAGGCTGGACAGTAAT 720  
 TCAGAGGCGCCACGATGGCTCAATGGACTTCAACCGGCCCTGGGAAGCCTACAAGCGGG 780  
 15 GTTTGGGGATCCCCACGGCGAGTTCTGGTGGGTCTGGAGAAGGTGCATAGCATCACGGG 840  
 GGACCGCAACAGCCGCTGGCGGTGACGCTGCGGGACTGGGATGGCAACGCCGAGTTGCT 900  
 GCAGTTCTCCGTGCACCTGGGTGGCGAGGACACGGCTATAGCTGCAGCTCACTGCACC 960  
 CGTGGCCGGCGAGCTGGGCGCCACCACCTGCCACCCAGCGGCTCTCCGTACCCCTTCTC 1020  
 CACTTGGGACCAAGGATCAGACCTCCGACGGGACAAGAACTGCGCCAAGAGCCTCTCTGC 1080  
 20 CCCATCGGTGGCTCAAGACCTGACCATGTTCCCTCTCCCTGACCCCGGCGAGGAGGTG 1140  
 GTGGTTTGGCACCTGCAGCAATTCCAACCTCAACGGCCAGTACTTCCGCTCCATCCACA 1200  
 GCAGCGGCAGAAGCTTAAGAAGGGAATCTTCTGGAAGACCTGGCGGGGCGCTACTACCC 1260  
 GCTGCAGGCCACCACCATGTTGATCCAGCCCATGGCAGCAGAGGCAGCTCCTAG 1315  
 (SEQ ID NO: 54)

#### Protein sequence for CG57051-02.

>CG57051\_02  
 MSGAPTAGAALMLCAATAVLLSARSGPVQSKSPRFASWDEMNVLAHGLLQLGQGLREHAE 60  
 RTRSQLSALERRLSACGSACQGTGSTDLPAPESRVDPEVLHSLQTQLKAQNSRIQQLF 120  
 HKVAQQQRHLEKQHLRIQHLQSQFGLLDHKHLDHEVAKPARRKRLPEMAQPVDPAHNVSR 180  
 30 LHHGGWTVIQRHDGSMDFNRPWEAYKAGFGDPHGEFWLGLKGVHSITGDRNSRLAVQLR 240  
 DWDGNAELLQFSVHLGGEDTAYSLQLTAPVAGQLGATTVPSPGLSVFPSTWDQDHLRRD 300  
 KNCAKSLSAPSVAQRPDHVPSPPLTPAGGWVFGTCSHSLNNGQYFRSIPQQRQKLKKGIFW 360  
 KTWGRYYPQLQATMLIQPMAAEAS 386 (SEQ ID NO: 55)

#### Figure 23. Nucleotide and Protein Sequences For CG57051-03.

Nucleotide sequence encoding the Angiopoietin-like protein, CG57051-03.

>CG57051-03  
 CCCCAGAGTCCCCGAATCCCCGCTCCAGGCTACCTAAGAGGATGAGCGGTGCTCCGAC 60  
 40 GGCCGGGGCAGCCCTGATGCTCTGCGCCGCCACCGCCGTGCTACTGAGCGCTCAGGGCGG 120  
 ACCCGTGCAGTCCAAGTCGCGCGCTTTGCGTCTTGGGACGAGATGAATGTCTTGGCGCA 180  
 CGGACTCTGTCAGCTCGGCCAGGGGCTGCGCGAACACGCGGAGCGCACCCGAGTCAGCT 240  
 GAGCGCGCTGGAGCGCGCCTGAGCGCGTGC GGGTCCGCTGTGTCAGGGAACCGAGGGGTC 300  
 CACCGACCTCCCGTTAGCCCCTGAGAGCCGGGTGGACCTGAGGTCTTCACAGCCTGCA 360  
 45 GACACAACTCAAGGCTCAGAACAGCAGGATCCAGCAACTCTTCCACAAGGTGGCCAGCA 420  
 GCAGCGGCACCTGGAGAAGCAGCACCTGCGAATTCAGCATCTGCAAAGCCAGTTTGGCCT 480  
 CCTGGACCACAAGCACCTAGACCATGAGGTGGCCAAGCCTGCCCCAAGAAAGAGGCTGCC 540  
 CGAGATGGCCAGCCAGTTGACCCGGCTCACAATGTGACCGCCTGCACCATGGAGGCTG 600  
 GACAGTAATTCAGAGGCGCCACGATGGCTCAGTGGACTTCAACCGGCCCTGGGAAGCCTA 660  
 50 CAAGGCGGGGTTTGGGGATCCCCACGGCGAGTTCTGGCTGGGTCTGGAGAAGGTCCATAG 720  
 CATCACGGGGGACCGCAACAGCCGCTGGCCGTGACGCTGCGGGACTGGGATGACAACGC 780  
 CGAGTTGCTGCAGTTCTCCGTGCACCTGGGTGGCGAGGACACGGCCTATAGCCTGCAGCT 840  
 CACTGCACCCGTGGCGGCCAGCTGGGCGCCACCACCGTCCCACCCAGCGGCTCTCCGT 900  
 ACCCTTCCCCACTTGGGACCAAGATCAGACCTCCGACGGACAAGAACTGCGCCAAGAG 960  
 55 CCTCTCTGGAGGCTGGTGGTTTGGCACCTGCAGCCATTCCAACCTCAACGGCCAGTACTT 1020  
 CCGCTCCATCCCCACAGCAGCGCGCAGAAGCTTAAGAAGGGAATCTTCTGGAAGACCTGGCG 1080  
 GGGCCGCTACTACCCGCTGCAGGCCACCACCATGTTGATCCAGCCCATGGCAGCAGAGGC 1140  
 AGCCTCCTAG 1150 (SEQ ID NO: 56)

#### Protein sequence for CG57051-03.



5 >CG57051-03  
 MSGAPTAGAALMLCAATAVLLSAQGGPVQSKSPRFASWDEMNVLAHGLLQLGQGLREHAE 60  
 RTRSQLSALERRLSACGSACQGTGSTDLPLAPESRVDPEVLHSLQTQLKAQNSRIQQLF 120  
 HKVAQQQRHLEKQHLRIQHLQSOFGLLDHKHLDHEVAKPARRKRLPEMAQPVDPAHNVSR 180  
 LHHGGWTVIQRRHDGSDFNRPWEAYKAGFGDPHGEFWLGLEKVHSITGDRNSRLAVQLR 240  
 DWDDNAELLQFSVHLGGEDTAYSLQLTAPVAGQLGATTVPVPSGLSVFPPTWDQDHLRRD 300  
 KNCAKSLSGGWFGTCSHSNLNGQYFRSIPQQRQKLKKGIFWKTWRGRYYPLQATTMLIQ 360  
 PMAAEAAS 368 (SEQ ID NO:57)

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TRA 1677606v1